

REMARKS

Claims 105, 111, 112 and 130 are amended. Claims 105, 111-114 and 130 are pending in the application.

Claims 105, 112, 113 and 130 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rostoker, U.S. Patent No. 5,744,399, as combined with Herndon, U.S. Patent No. 4,843,034. The Examiner is reminded by direction to MPEP § 2143 that a proper obviousness rejection has the following three requirements: 1) there must be some suggestion or motivation to modify or combine reference teachings; 2) there must be a reasonable expectation of success; and 3) the combined references must teach or suggest all of the claim limitations. Claims 105, 112, 113 and 130 are allowable over Rostoker as combined with Herndon for at least the reason that the references, individually or as combined, fail to teach or suggest every limitation in any of those claims.

As amended, independent claim 105 recites an initial material comprising molecules consisting of silicon and carbon, the material comprising pores having a size and being adjacent a conductive electrical component. Claim 105 additionally recites decreasing the dielectric constant of the initial material by vaporizing a portion of the initial material to expand the size of the pores. The amendment to claim 105 is supported by the specification at, for example, page 9, line 18 through page 10, line 6. Rostoker discloses forming a material comprising carbon fullerenes combined with a matrix forming material which can include, for example, silicon oxide, silicon nitride or undoped silicon (col. 3, ll. 30-35 and col. 4, ll. 29-34). The composite layer disclosed by Rostoker which can include carbon molecules within a porous matrix of silicon comprising molecules does not teach or

suggest the claim 105 recited initial material comprising molecules consisting of silicon and carbon. Additionally, Rostoker does not teach or suggest the claim 105 recited decreasing the dielectric constant of the material comprising molecules consisting of silicon and carbon.

Herndon discloses rendering insulative materials conductive by implanting ions and indicates that a potential material which can be rendered conductive is silicon carbide (col. 3, ll. 45 through col. 4, ll. 10). As combined with Rostoker's disclosed composite of matrix forming material and fullerene, the rendering conductive of insulative material disclosed by Herndon contributes nothing toward suggesting the claim 105 recited decreasing the dielectric constant of a material comprising molecules consisting of silicon and carbon by vaporizing a portion of the material to expand the size of pores within the material. Further, utilization of the conductive silicon carbide comprising material of Herndon in place of the matrix forming material disclosed in Rostoker, as suggested by the Examiner at page 3 of the present Action, would render the Rostoker invention unsuitable for its intended purpose since the composite of Rostoker is intended to be insulating. Accordingly, independent claim 105 is not rendered obvious by the cited combination of Rostoker and Herndon and is allowable over these references.

Dependent claims 112 and 130 are amended to properly depend from claim 105. Dependent claims 112, 113 and 130 are allowable over the cited combination of Rostoker and Herndon for at least the reason that they depend from allowable base claim 105.

Dependent claims 111 and 114 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rostoker and Herndon as further combined with one of Gnade, U.S. Patent No. 5,494,858; TeVelde, U.S. Patent No. 4,561,173 or Matthews, U.S. Patent No.

5,171,713. As discussed above, independent claim 105 is not rendered obvious by the combination of Rostoker and Herndon. As indicated by the Examiner at page 4 of the present Action, Gnade is relied on for showing a second layer formed prior to an evaporation step. As indicated at page 5 of the present Action, each of Matthews and TeVelde are relied upon as showing a support structure between metallization structures. As combined with Rostoker and Herndon, not one of Matthews, TeVelde or Gnade contributes toward suggesting the claim 105 recited decreasing the dielectric constant of a material comprising molecules consisting of silicon and carbon by vaporizing a portion of the initial material. Accordingly, independent claim 105 is not rendered obvious by the various cited combinations of Rostoker, Herndon, Matthews, TeVelde and Gnade. Dependent claims 111 and 114 are allowable over the cited combinations of Rostoker, Herndon, Matthews, TeVelde and Gnade for at least the reason that they depend from allowable base claim 105.

For the reasons discussed above, pending claims 105, 111-114 and 130 are allowable. Accordingly, applicant respectfully requests formal allowance of such pending claims in the Examiner's next action.

Respectfully submitted,

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